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vided for, if Sylley were not subdued as well as Cornwall.

VIII. An Account of Mr. Appleby's Procefs to make Sea-Water fresh; with some Experiments therewith; communicated to the Royal Society, by W. Watson, F. R. S.

head Feb. 8, THE making fea-water fresh has been frequently attempted, and several accounts thereof, from time to time, been communicated to the Royal Society. I thought it therefore not improper to lay before you Mr. Appleby's process for this purpose, in order to its being preserved in the journal-books of the Society. To this I have subjoined some experiments upon the water prepared in Mr. Appleby's manner, made by Mr. Michael Clark, operator at Apothecaries Hall, a person extremely well versed in the theory and practice of chemistry, at the desire, and under the inspection, of the censors of the college of physicians, to whom Mr. Appleby's process was referred by the lords commissioners of the admiralty.

Mr. Appleby's process.

INTO twenty gallons of sea-water put six ounces of a fixed alcali, prepared with quick-lime as strong as lapis infernalis, and six ounces of bones calcined

to whiteness, and finely powder'd. With a flow fire,

draw off in a common still fifteen gallons.

Mr. Appleby conceives, that the alkali here employed is the best adapted to prevent the bituminous matter in sea-water from rising by the heat in distillation.

Mr. Clark's experiments.

INTO a spoonful of the distilled sea-water he put twenty drops of a solution of silver in aq. fortis: He likewise did the same with the like quantity of common water distilled. There appeared no change in either, and both retained their transparency.

This demonstrates, that the distilled sea water is by the process intirely freed from marine salt, or its acid spirit. For, if we take a spoonful of common distilled water, and add the least particle of sea-salt, with the point of a penknise, and then drop into the mixture one or two drops of the solution of silver, it will appear turbid and milky.

From the number of animal bodies constantly perishing in the sea, it may reasonably be suspected, that a volatile urinous spirit may be retained in this distilled water; and this is evident from the follow-

ing experiment:

Into a spoonful of distilled sea-water drop ten drops of a strong solution of sugar of lead, and the mixture

immediately becomes turbid and milky.

Into another spoonful of common distilled water, with two drops of spirit of sal ammoniac, add ten drops of a solution of sugar of lead: and this mixture had the same appearance with the foregoing.

If into a spoonful of common distilled water is dropp'd one drop of oil of tartar per deliquium, and then added ten drops of a strong solution of corrosive sublimate, the mixture will immediately become turbid and brown, and with a few drops of the solution of silver, it will be precipitated, and turn milky. It is a volatile alkali therefore, and not a fixed one, that is contained in this water.

The folution of filver will not discover a volatile alkali contained in water, but very plainly a fixed one.

A folution of fugar of lead will not discover a small quantity of marine salt or spirit, till we add more.

A folution of fublimate will manifest both a volatile and fixed alkali.

IX. Extract of a Letter from Signor Camillo Paderni, to Dr. Mead, concerning the Antiquities dug up from the antient Herculaneum, dated from Naples, Nov. 18, 1752. Translated from the Italian.

Read Feb. 8, HE things, of which I have the charge, are many, and extraordinary; confifting of

Metals; that is, bronzes, filver and gold of all kinds, of excellent workmanship.

Beautiful cameo's and intaglio's.

Glass of all forts.